

CLAIMS

1. A manufacturing method of a photoelectric conversion device using a semiconductor electrode composed of semiconductor nanoparticles, comprising:
 - 5 coating a paste containing a binder and semiconductor nanoparticles dispersed therein on a transparent conductive substrate; and
 - 10 forming the semiconductor electrode by drying the paste, and thereafter pressing the paste to bond the semiconductor nanoparticles onto the transparent conductive substrate while heating it to a temperature in the range from 30°C to the softening temperature of the transparent conductive substrate.
- 15 2. The manufacturing method of a photoelectric conversion device according to claim 1 wherein the temperature is equal to or higher than 50°C.
- 20 3. The manufacturing method of a photoelectric conversion device according to claim 1 wherein the temperature is equal to or lower than 200°C.
4. The manufacturing method of a photoelectric conversion according to claim 1 wherein the temperature is in the range from 50°C to 120°C.
- 25 5. The manufacturing method of a photoelectric conversion device according to claim 1 wherein the transparent conductive substrate includes a transparent plastic substrate.

6. The manufacturing method of a photoelectric conversion device according to claim 1 wherein the semiconductor nanoparticles dispersed in the paste previously retain a sensitizing dye.

5 7. The manufacturing method of a photoelectric conversion device according to claim 1 wherein the photoelectric conversion device is a wet solar cell.

10 8. A photoelectric conversion device using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

15 said semiconductor electrode formed by:
coating a paste containing a binder and
semiconductor nanoparticles dispersed therein on a
transparent conductive substrate; and

20 forming the semiconductor electrode by drying
the paste, and thereafter pressing the paste to bond
the semiconductor nanoparticles onto the transparent
conductive substrate while heating it to a temperature
in the range from 30°C to the softening temperature of
the transparent conductive substrate.

9. The photoelectric conversion device according to claim 8 wherein the photoelectric conversion device is a wet solar cell.

25 10. A manufacturing method of a photoelectric conversion device using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

coating a paste containing a binder and

containing semiconductor nanoparticles retaining a sensitizing dye and dispersed therein on a transparent conductive substrate; and

5 forming the semiconductor electrode by drying the paste, and thereafter pressing the paste to bond the semiconductor nanoparticles onto the transparent conductive substrate while heating it to a temperature in the range from 30°C to lower one of the softening temperature of the transparent conductive substrate and the deactivation temperature of the sensitizing dye.

10 11. The manufacturing method of a photoelectric conversion device according to claim 10 wherein the photoelectric conversion device is a wet solar cell.

15 12. A photoelectric conversion device using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

20 said semiconductor electrode formed by:
coating a paste containing a binder and
containing semiconductor nanoparticles retaining a
sensitizing dye and dispersed therein on a transparent
conducting substrate; and

25 forming the semiconductor electrode by drying
the paste, and thereafter pressing the paste to bond
the semiconductor nanoparticles onto the transparent
conducting substrate while heating it to a temperature
in the range from 30°C to lower one of the softening
temperature of the transparent conductive substrate and

the deactivation temperature of the sensitizing dye.

13. The photoelectric conversion device according to claim 12 wherein the photoelectric conversion device is a wet solar cell.

5 14. A manufacturing method of an electronic apparatus using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

10 coating a paste containing a binder and semiconductor nanoparticles dispersed therein on a substrate; and

15 forming the semiconductor electrode by drying the paste, and thereafter pressing the paste to bond the semiconductor nanoparticles onto the substrate while heating it to a temperature in the range from 30°C to the softening temperature of the substrate.

20 15. An electronic apparatus using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

25 said semiconductor electrode formed by:
coating a paste containing a binder and semiconductor nanoparticles dispersed therein on a substrate; and

30 forming the semiconductor electrode by drying the paste, and thereafter pressing the paste to bond the semiconductor nanoparticles onto the substrate while heating it to a temperature in the range from 30°C to the softening temperature of the substrate.

16. A manufacturing method of an electronic apparatus using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

coating a paste containing a binder and
5 containing semiconductor nanoparticles retaining a sensitizing dye and dispersed therein on a substrate; and

10 forming the semiconductor electrode by drying the paste, and thereafter pressing the paste to bond the semiconductor nanoparticles onto the substrate while heating it to a temperature in the range from 30°C to lower one of the softening temperature of the substrate and the deactivation temperature of the sensitizing dye.

15 17. An electronic apparatus using a semiconductor electrode composed of semiconductor nanoparticles, comprising:

said semiconductor electrode formed by:
coating a paste containing a binder and
20 containing semiconductor nanoparticles retaining a sensitizing dye and dispersed therein on a substrate; and

25 forming the semiconductor electrode by drying the paste, and thereafter pressing the paste to bond the semiconductor nanoparticles onto the substrate while heating it to a temperature in the range from 30°C to lower one of the softening temperature of the

**transparent conductive substrate and the deactivation
temperature of the sensitizing dye.**